
Northern Europe Electricity Regional Initiative – Implementation Group “Optimizing the use of the interconnectors – SwePol Link and Baltic Cable”

Final report - 2007

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1 Background

There is a general understanding that integration of electricity markets requires an efficient utilization of existing interconnectors.

The regional approach as a transitional phase towards the creation of a single internal electricity market was first launched in the March 2004 Strategy Paper of The Commission. The subsequent ERGEG Regional Initiative is also explicitly supported by the Energy Council 8 June 2006, which at the same time stressed that “Cross-border exchange of energy should be improved and the regional energy cooperation should be accelerated...”

There are currently five existing interconnectors on the Nordic-Continental interface and this Implementation Group will focus on Baltic Cable and SwePol Link which both are operated as “merchant lines”. In this report merchant line will refer to an interconnector where the owners have priority rights to the capacity, and where the cost for the cable are covered by the users (i.e. no part of the cost is included in the calculation of the respective national grid tariffs).

There are two issues that have to be addressed in the work of the Implementation Group for SwePol Link and Baltic Cable:

- the present operation of the cables including opportunities for third party access
- how these cables can be integrated in a common coordinated regional congestion management method according to the provisions in the CMG (Congestion Management Guidelines)

Special attention is given to the consequences of the present ownership structure and capacity allocation, with a view to move towards harmonized capacity allocation and congestion management methods on all present and future interconnectors between the Nordel area and continental Europe.



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There are terms of reference for the implementation group stated by the Regional Coordination Committee (RCC) of the ERGEG Northern Europe Electricity Regional Initiative. According to the terms of reference the implementation group will describe the current situation, the EC legal framework, describe the pros and cons of present methods applied, list alternative solutions and finally propose capacity allocation and congestion management mechanisms for Baltic Cable and SwePol Link which aligns them as much as possible with other interconnectors between Nordel area and continental Europe.

The Implementation Group only addresses issues in relation to day-ahead allocation and utilization of transmission capacity. However the possibilities for intra-day utilization are also important for the total efficient use of interconnectors. Furthermore, the implementation group does not address the issue how available transmission capacity (ATC) for the interconnectors is determined as a function of the situation in the surrounding national grids.

Parallel to the work in this implementation group, the IG Transparency of the Northern Europe region has recently published a report containing a common regional understanding of market relevant information to be published by TSOs/PXs. This is based on present EU transparency requirements as well as ERGEG guidelines published. The implementation is to take place in a two step approach during 2008. The IG Transparency will be monitoring the implementation. In the report it is mentioned that it should be discussed in this IG to what extent the transparency rules can be adopted regarding Baltic Cable and SwePol Link.

2 Summary of the work in the implementation group and the current situation regarding SwePol Link and Baltic Cable

The implementation group has finalized all tasks according to the Terms of reference and reported all work in a Status report (published at ERGEG:s website on the 15th of April) and in this Final report.

In summary, the findings are:

- Both cables are operated as “merchant lines” and that the capacities on the cables are primarily reserved for the investors in the cable.
- These cables are operated by the owners of the cables and the current practice for each cable operator is that the capacity utilization among owners is based on prices on wholesale markets (PXs) at each end of the interconnector. Statistics provided by the cable operators, indicate that the power flow is for the vast majority of all hours directed in the right direction from a socioeconomic point of view – i.e. from the low price area to the high price area (in this report referred to as “efficient use” at the time of day-ahead nomination).
- In practice, the capacities are currently being used by the owners of the priority rights. Third party access possibilities on the cables have not been utilised.
- The maximum thermal capacities of the cables are often not, possible to use due to sometimes considerable restrictions imposed by the TSO:s in Sweden, Germany and Poland¹.
- There are aggravating circumstances on the Polish electricity market for new players on SwePol Link and introducing market coupling between the Polish and Nordic markets, due to low liquidity on the Polish Power Exchange.

¹ In general in large interconnected power systems, thermal capacities of lines can nor always be utilized as other security criterias, as voltage and dynamic stability, are dimensioning for the total transmission capacity.

- The implementation group has not reached a common view regarding the interpretation of the legal situation for SwePol Link and Baltic Cable. The respective parties' views have been stated in chapter 4 of the Status report.
- The group agrees that, despite diverging views on the legal question, the crucial issue is to secure an efficient use of the interconnector capacity, making it available to the market.
- The group has produced a list of alternative solutions which are presented in chapter 3 and made a final proposal (chapter 4) regarding capacity allocation and congestion management mechanisms for Baltic Cable and SwePol Link, which aligns them as much as possible with other interconnectors between the Nordel area and continental Europe.
- The additional issue of transparency has not been addressed by the group.

3 List of alternative solutions

The implementation group has analysed the situation regarding the two cables and identified a number of possible alternative solutions for capacity allocation mechanisms. The different alternative solutions (which are the same for the two interconnectors) are described below together with a description of the pros (+) and cons (-) with respective solution.

The different possible alternative solutions are the following:

1. Keeping existing capacity allocation method as it is, complemented with monitoring and review by regulators. This solution would mean that the reserved capacity would remain with the cable owners but praxis for operation and methods and efficiency of utilization of the capacity would be monitored and reviewed by the regulators.

- + Relatively high efficiency as regards the use of allocated capacity according to statistics provided by the cable owners.
- Regulatory risk as this proposal might not be compliant with the legal framework.
- Not a totally transparent method as regards the daily utilization of the capacity allocation.

- Not in line with the allocation methods mentioned in Regulation (EC) No. 1228/2003².

2. Introducing market coupling through implicit auctions. In a market coupling system the involved Power Exchanges, TSO:s and traders cooperate in defining supply/demand, available transmission capacity, and netting of power flows across bottlenecks. There are several models of market coupling that could be implemented (close and loose coupling etc) and there could also be a combination of day-ahead market coupling with explicit auctions on e.g. monthly and annual basis³.

- + 100% efficient use of the allocated capacity.
- + Transparent method as regards the daily utilization of the capacity.
- + High degree of compatibility in the region.
- + In line with the allocation methods mentioned in Regulation (EC) No. 1228/2003

3. Introducing explicit auctions of the capacity (longer term and day-ahead). Available capacity is auctioned before the day-ahead electricity market. The traders therefore make assumptions on capacity need and the relevant flow direction for the coming day-ahead market. The capacity is then bought according to those assumptions.

- + Probably similar (or somewhat less) efficiency as regards the use of allocated capacity as alternative 1.
- + In line with the allocation methods mentioned in Regulation (EC) No. 1228/2003
- + A step towards a high degree of compatibility in the region.
- Less efficient method than market coupling through implicit auctions.
- Not a totally transparent method as regards the daily utilization of the capacity allocation.

² The parties of the Implementation Group have different legal opinions whether this regulation is applicable in relation to these cables and if allocation methods would be in breach of the methods mentioned in Regulation (EC) No 1228/2003.

³ Baltic Cable has no intention to introduce explicit auctions in this alternative.

4 Proposal

It is clearly the understanding of the implementation group that market coupling through implicit auctions is the preferred choice for both Baltic Cable and SwePol Link, given that the existing prerequisites (see below) can be fulfilled and that positive and satisfactory solutions can be achieved. Market coupling would secure an efficient use of the cables as far as it concerns directing the power flow in the right direction (i.e from the low price area to the high price area). Market coupling would also improve the transparency on the market. Furthermore, market coupling would most likely give the cable owners a similar level of revenue streams as currently, which means that the incentives for maintaining the interconnectors and providing the market with transmission capacity will remain.

However, introducing market coupling through implicit auctions on Baltic Cable and SwePol Link demands a number of prerequisites that have to be fulfilled:

- Liquid power exchanges on both sides of the cables.
- Harmonising process as regards gate closure times and day ahead trading seven days a week.
- Technical and administrative conditions for power flow, ramping etc.
- Willingness from the cable operators and owners to involve themselves in a market coupling project including additional commitments following responsibilities connected to the involvement in the market coupling office as well as other contractual commitments.
- Regulators review of the procedures and mechanisms in the market coupling project.

With respect to the analysis made regarding the situation for the two cables the implementation group has the following proposals.

a) Baltic Cable

It is the judgement of the group that all prerequisites above are likely to be fulfilled regarding Baltic Cable and therefore the proposal from the implementation group is for the owners and the operator of Baltic Cable to introduce market coupling. The owners of Baltic Cable have announced their intention to do this and will seek solutions to introduce day-ahead market coupling during 2008, given that a positive solution can be achieved. The implementation group will monitor the situation and the regulators will also separately follow very closely the developments towards this aim to introduce market coupling in 2008, in order to ensure that the processes develop in a satisfactory way.

b) SwePol Link

It is the judgement of the group that not all of the prerequisites are likely to be fulfilled regarding SwePol Link in the near future⁴. This puts the situation for SwePol Link in a different position compared to Baltic Cable. Therefore, the proposal from the implementation group is for the owners and the operator of SwePol Link to introduce market coupling as soon as major prerequisites are fulfilled and that acceptable solutions can be achieved. The owners of SwePol Link have announced their commitment to this. The implementation group will monitor the situation and the regulators will also separately follow the development of the prerequisites and conditions for introducing market coupling on a very close basis, in order to ensure that the processes are developing in a satisfactory way.

c) Follow up

⁴ A conditional timetable that describes all prerequisites that has to be fulfilled regarding SwePol Link will be set up in the context of the groups follow up schedule during 2008.



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The group proposes to follow the process during 2008 in order to closely monitor that the activities proceed in a reasonable manner towards the aim to introduce market coupling in practice. The monitoring will include a continued dialogue with the owners and operators of the interconnectors as well as Power Exchanges.

d) Transparency

The group proposes to start work during 2008 regarding when the requirements of the Report on Transparency of the ERGEG North Europe Electricity Regional Initiative can be adopted concerning Baltic Cable and SwePol Link.



Annex 1 – Participants in the Implementation group

Energy Markets Inspectorate (Sweden) - chair: Margareta Bergström, Tony Rosten, Johan Roupe
Bundesnetzagentur (Germany): Andrea Korr, Dr. Frank-Peter Hansen
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SwePol Link: Björn Forsberg, Lars Marketeg (SwePol Link), Bo Wahrgren (Vattenfall)

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PSE Operator: Bronislaw Nowinski
Vattenfall Transmission: Jens Mattausch
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